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CORRECTIONS AND ADDITIONS.

1908.

July:

Page 205, column 1, fifth line from top, "6th, of 34.2 feet, which was within 0.3 foot," *should read* "7th, of 34.0 feet, which was within 0.5 foot."

1916.

November:

Page 638, second equation, the term within the curves $(\frac{x}{\sigma}-\frac{x^3}{\sigma^3})$ *should read* $(\frac{3x}{\sigma}-\frac{x^3}{\sigma^3})$.

1917.

October:

Page 487, column 2, next to last line, *for* "later than" *read* "earlier than."

December:

1918.

Page 582, column 1, equation (4), *for* $48\delta p^2$ *read* $14\delta p^2$.

January:

Page 47, condensed climatological summary, *for* the State of Washington, *substitute* the following values:

36.6°	+5.9°	3 stations	70°	1	Anatone	−15°	31	4.88	+0.19	Cedar lake	21.85	Wenatchee	0.30

Same table, footnote, "Mare Island" *should read* "League Island."

February:

Page 105, column 1, sixth line from bottom, *for* "isotherm" *read* "isobar."

Page 108, Table I, Pensacola, Fla., minimum temperature, *for* "4" *read* "37"; date of minimum temperature, *for* "37" *read* "4."

May:

Page 259, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

June:

Page 291, column 2, table headed "Massachusetts, Cambridge," *for* "Howard" *read* "Harvard."

Page 300, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

July:

Page 312, column 1, twenty-fourth line from top, *omit* the word "molecular."

Page 315, footnote, column 1, fifth line from bottom, *for* old English "E" *substitute* gothic "E."

Page 318, equation (34), the left-hand member *should read* "$\frac{d\bar{u}_0}{dt}$".

Page 319, column 1, ninth line, transfer comma *following* "which" to *before* "which."

Page 346, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

August:

Page 359, author's name, *for* "William" *read* "Wilson."

Page 395, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

September:

Page 438, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

October:

Page 2 of cover, Contents, column 2, Section VII, Table II, accumulated amounts of precipitation, *for* page "491" *read* "494."

Page 491, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

November:

Page 542, Table I, South Atlantic States, Greenville, S. C., first column of figures, *for* "1,013" *read* "1,039."

December:

Page 607, Medicine Hat, Alberta, total snowfall, *for* "5.8" *read* "8.8."

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Report on modes of air motion and the equations of the general circulation of the earth's atmosphere (G. P. Paine) (6 figs.), 311–323.
Smoke as an indicator of gustiness and convection (P. W. Etkes & C. F. Brooks) (7 figs.), 459–460.
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